(e) The studies conducted on health effects of bio-mass smoke indicate that the incidence of smoke related diseases is higher in rural houses using biomass fuels in traditional chulhas. However, quantified conclusions have not been drawn from such studies as there are many other risk factors for such diseases which are difficult to account for.

(d) To improve the quality of life of rural women and also to reduce the incidence of smoke related diseases in them, the Central Govt, is implementing two National programmes viz. National Programme on Improved Chulhas and National Project on Biogas Development through the State Government Nodal Departments and Agencies. The two programmes provide for Central subsidy to beneficiaries for installation of improved chulhas and biogas plants respectively besides other incentives. Under the above programmes, 157.05 lakh chulas and 18.68 lakh biogas plants have so far been set up in the country.

Permission to cane-growers to use alcohol as fuel for veb'cles

1472. SHRI BHUPINDER SINGH : MANN : Will the PRIME MINISTER be pleased to stale :

(a) whether Government are considering to allow use of a'cohol to the cane-?rowers who want to use their own production as alternative fuel for vehicles; and

(b) if so, the details thereof and if not, the reasons therefor ?

THE MINISTER OF STATE IN THE MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES (SHRI S. KRISHNA KUMAR) : (a) No. Sir.

(b) Ethyl Alcohol produced in the country presently from molasses is almost entirely used as chemical feed stosk and for production of potable alcohol. Its custody and usages is now entirely under the jurisdiction of the State authorities.

Strategy adopted to harness solar energy

1473. SHRI GOVINDRAO ADIK : Will the PRIME MINISTER be pleased to state :

(a) wftWh?- it is a fact that in a WHO-sponsored workshop, the need to tap the abundant source of solar energy in India was stressed in view of the fact that India lies in the sunny region and receives four to seven kilowatt hour (KWH) of solar radiation per square metre per day with 250 to 300 clear a sunny days a year ;

Co) if so, the details thereof ; and

(c) what strategy Government have so far adopted or propose to adopt for harnessing the vast source of solar energy ?

THE MINISTER OF IN THE MINISTRY OF NON CONVENTIONAL ENERGY SOURCES (SHRI S. KRISHNA KUMAR) : (a) and (b) Yes Sir. WHO sponsored a workshop on "Harnessing of Solar Energy and Designing Energy efficient Buildings in the Health Sector" at National Institue of Health and Family Welfare, New Delhi during January 10 to 14, 1994, in association with the Ministry of Health. This work shop concentrated on use of solar energy in health sector for variety of applications such as water heating, lighting, medical refrigeration, water pumping, powering of medical equipment and solar incubator and design of buildings using solar passive architecture ttc.

(c) Yes, Sir. The Ministry of Non-Conventional Energy Sources havs jrepared plans for harnessing solat- energy through both solar thermal & solar 0'10'ovolatic routes. During the 8th plan, it is envisaged to take up installation of 11 lakh square metre of solar ther nil collector are , 7 lakh nos. solar cokkers, solar ohotovolatic systems aggregating to 25MvV and a solar thermal povver plant of 30MW capacity under the new "Strategy & Action Plan" prepared by the Ministry. The steps taken include promotional policies, package of incentives, soft loans fo' manufacturers and users, information dissemination as well as manpower development.

Fisheries Oceanographic Research Vessels

1474. DR. SHRIKANT RAMCHANDRA JICKHAR : Will the PRIME MINISRER be pleased to state :

(a) whether the Fisheries Oceanographic Research Vessel 'Sagar Sampada' has been successful in exploring the deep sea fish

resources and ecosystem dynamics of specific varieties and if so, to what extent ;

(b) what are the varieties of fish whose ecosystem dynamics is being studied and what are their economic implications ;

(c) whether Government propose to acquire or construct some more such research vessels; and

(d) whether coast benefit studies of such vessels have been made ?

THE MINISTER OF STATE IN THE DEPARTMENT OF OCEAN DEVELOPMENT (SHRI EDUARDO FALEIRO) : (a)and(b) Yes, Sir.

The Fisheries Oceanographic Research Vessel SAGAR SAMPADA has undertaken more than 110 cruises in the Exclusive Economic Zone of our country in different regions and different seasons. During the exploratory fishing cruises, many areas having potential resources of deep sea forms such as Indian Drfift Fish, Bulls Eye, Pink Perch, Ribbon Fishes, Carrangids, other forms of perches, deep sea Prawns, Deep Sea Lobster and Cuttle Fish have been identified. Many fishery related parameters, such as Hydrography, Phytoplan-kton, Zoo Plankton production in different ecological realms, such as inshore, offshore, deep sea and oceanic regions including the seas around Lakshadweep and Andaman & Nicobar Islands have been observed during the cruises for understanding the dynamics of production and distribution of Meso-plagic Demersal Resources.

(c) and (d) The present strength of the vessel is not sufficient keeping in iew the area of operation of our EEZ. A proposal is under formulation to acquire a multipurpose oceanographic research vessel which can also be used for fishery oceanographic surveys. A cost benefit analysis will be undertaken while processing the proposal.

Survey of Exclusive Economic Zone

1475. DR. SHRIKANT RAMCHANDRA JICHKAR : Will the PRIME MINISTER be pleased to state:

(a) whether cobalitiferrous crust on submerged plateaus in India's Exclusive Economic Zone have been fully or partially surveyed ;

(b) if so, what is their extent and economic significance ;

(c) in what part of EEZ they are located ;

(d) whether the Oceanographic Research Vessel "Sagar Kanya" is alone sufficient to do the survey or we require some more such vessels ; and

(e) if so, by when Government would procure more such vessels ?

THE MINISTER OF STATE IN THE DEPARTMENT OF OCEAN DEVELOPMENT (SHRI EDUARDO FALEIRO) : (a) to (c) The covalt rich manganese encrustation normally occurs on ancient 'underwater seamounts where up-welling takes place and biological activity also is significant. So far no such work on the cobalt rich manganese encrustation has been undertaken by the concerned Institutions in the EEZ of our country.

(d) and (e) The present strength of the vessels is not sufficient in view of the area of ooperation in the EEZ. A proposal is under formulation to acquire a multipurpose Oceanographic Research Vessel which could also be used for non-living resource survey.

HSurvey and study of sulphide Mineralisation

1476. DR. SHRIKANT RAMCHANDRA JICHKAR : Will the PRIME MINISTER be pleased to state :

(a) whether the survey and study of the Sulphide mineralisation in Carlsberg Ridge and in the Andaman Sea has been made;

(b) if so, what are the environmental impliations of its mining ;

(c) if not, by when the survey and study is likely to be completed ;

(d) whic hreserach vessel is engaged in doing this suavey;

(e) how can one research vessel be engaged in so many diverse activities like survey of cobaltiferrous crust, coastal zone resources, sulphide maitieralisation survey etc. ; and

(f) whether it is also a fact that because of this, justice is not being met to any of the survey ?